

## ABSTRACT

5 A digital vibration transducer for producing a digital signal representative of  
 a vibration of a vibrating member is provided. The transducer includes a laser  
 source producing a light beam that is focused on a detection area. The light beam  
 is reflected towards this detection area by a reflector, at an angle with the optical  
 axis of the light beam and pivotable about a pivot axis. A linkage assembly  
 connects the vibrating member to the reflector to convert the vibrating of the  
 10 vibration member into a pivoting of the reflector, thereby sweeping the reflected  
 light beam across the detection area. A sensing and encoding assembly is  
 provided in the detection area and produces the digital signal representative of the  
 vibration of the vibrating member relatively to the sweeping of the light beam.

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1045129-103601  
 103601-1045129